# C2-7000 Series

## Dual Channel Video Processor

### Models C2-7100 & C2-7200

# C2

Layer, scale, position & key multiple live video, computer and HD sources in any format, resolution or standard.

tvONE

# C2-7000 Series
## more powerful than any other video processors in their class…

C2-7000 Series Dual Channel Video Processors provide the ultimate flexibility in analog and digital conversion as well as video and computer convergence. Two completely independent video processing and scaling engines and two video mixers afford maximum flexibility in handling virtually all analog and digital video signals. These units are equally at home in Broadcast facilities to smooth the transition from analog to digital video or in a Presentation environment to seamlessly match virtually any video or computer source to any type of display.

# Multiple Products In One Unit
## packed with features and ready for anything…

The original product in the CORIO2 family, the C2-5100, is often called the Swiss Army Knife of video converters. With such an accolade already taken, what can possibly describe C2-7000 Series products? Well, we can begin by adding "times 2". Since the C2-7100 and C2-7200 are Dual Channel Video Processors and each channel can act completely independently, most functions listed in the next two pages can be done in duplicate or these functions can be mixed with one channel performing one and the other channel performing another. Flexibility is the watchword. The C2-7000 Series products are indispensable tools in today's professional video environment.

- **SDTV-HDTV Converter**
- **HDTV-SDTV Scaler**
- **Analog to Digital Converter**
- **DVI to HD-SDI Converter**
- **SD-SDI to HD-SDI Converter**
- **Aspect Ratio Converter**
- **TV Standards Converter**
- **Chroma/Lumakeyer**
- **Logo Inserter**
- **Multi-Format Video Transcoder**

### 2x Single or One Dual Picture-in-Picture Device

The C2-7000 Series has unparalleled P-I-P capabilities. 1 or 2 windows can be placed over a background and the video sources for any of these can be from any of the unit's multiple inputs or a static image from the internal memory. Size and position the windows independently. Multi-Format, Multi-Windowing with maximum flexibility.

### 2x Aspect Ratio Converters

Whether you are displaying a 16:9 image on a 4:3 screen or visa versa, the C2-7000 Series is the solution. What's more, you are not limited to the usual 16:9 and 4:3 aspect ratios, since these units are fully equipped to handle and convert any aspect ratio imaginable, in any format.

### 2x Multi-format Logo Inserters

Multiple logos in GIF, JPEG or BMP format can be uploaded to the C2-7000's fast internal memory. These logos can be keyed over live video or computer sources directly from the unit – no need for a separate logo generator! The logo can be positioned and keyed as a solid image or a watermark.

### 2x Worldwide Standards Converters

Convert video signals bi-directionally between a wide variety of worldwide broadcast television standards, such as NTSC, PAL and SECAM. High performance is achieved by using digital conversion and digital comb filtering in the decoding process. Digital motion compensation smoothes fast moving scenes.

### 2x Video Scalers (Up Converters)
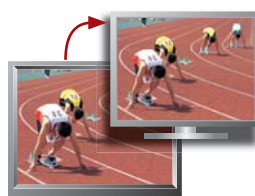
The C2-7000 de-interlaces and up-converts Composite, S-Video or YCbCr to computer or HDTV resolutions as RGB or YPbPr (analog or DVI) signals, with pixel adaptive motion compensation, 3:2 Pull-down and all the other features of a high performance video scaler.

## 11-Input Multi-Format Seamless Switcher

Glitch-free switching between any possible combination of video or computer signals, analog or digital. Switching transitions can be by cuts, cross-fades, or special effects. A full Preview Channel is available to set up complex functions, such as keying and P-I-P in advance of transferring to the Program Channel.

## 2x Scan Converters (Down Converters)
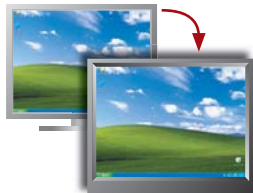
Computer to Video Conversion has never been better. Any computer or HDTV analog or digital format may be converted to any analog or digital video format. DVI to SDI provides an all digital conversion path to convert computer signals to video.

## 2x Chroma Keyers & Luma Keyers

Precise keying down to the pixel level can be achieved due to full bandwidth, 4:4:4 sampling. Keys can be Hard (clearly defined edge) or Soft (feathered edge) with layers of transparency. The key source can be one of the multiple images stored within the unit or any of the external video sources.

- **Multi-Format Windowing Device**
- **Multi-Format Sync/TBC**
- **Multi-Format Seamless Switcher**
- **Universal Video Scaler**
- **PC-HDTV Video Scaler**
- **PC-PC Video Scaler**
- **Scan Converter**
- **Up Converter**

# Advanced Image Processing Capabilities
## included as standard…

## Zoom up to 1000% or down to 10%

The ability to Zoom into any area of the image, while maintaining extremely high quality is possible because of the unique video sampling approach taken by CORIO2 technology. Variable zooming to 1000% and the ability to pan to any area of the image can be accomplished from the front panel or the Windows Control Panel. The zooming can even be independently applied to the images in the windows. You can also go in the opposite direction and shrink the image to as much as 10% of the original.
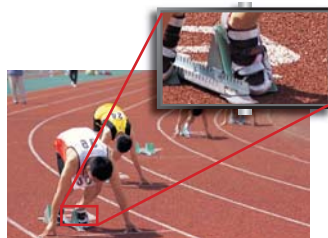
## Image Keying

The C2-7000 Series uses 4:4:4 Video Sampling to provide full bandwidth color. In addition to providing a more faithful color reproduction, this allows precise keying down to the pixel level. This is particularly beneficial when dealing with Transparent (Soft) Keys. Keying can be applied to the background or either window. The key source can be moving video from any input or still images from the unit's memory. Multi-format keying is no problem. Freely choose between video and computer, analog and digital for the key source or background.
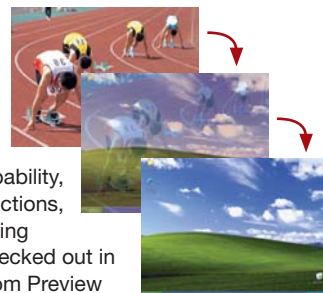
## Video Windowing

Dealing with different aspect ratio images is an easy task for the C2-7000 Series. A common requirement is to place two 4:3 images on a 16:9 display with an independent background. The ability to mix aspect ratios within the two windows provides even greater flexibility. This windowing power coupled with the unit's keying capability provides a powerful combination. When only one window is required, it only ties up one channel, leaving the other free to perform another task.

## Effects & Transitions

In the Switcher Mode, Channel 1 becomes Program and Channel 2 becomes Preview. Both channels have equal power and capability, so even complex functions, such as PIP and Keying can be setup and checked out in advance. Transfer from Preview to the Program output can be by Cut, Cross-Fade or Special Effect transitions, without any glitches, regardless of the format of the video sources. The duration of the fade or effect transition is variable and may be preset.

## Picture-in-Picture (P-I-P) Layering

Windowing is a true strength of the C2-7000 Series. Any video input can be shrink and placed into either of two windows of any size and positioned anywhere on the screen, even overlapping each other with user defined layer priority control. The windows can be placed over any video from any other input or a static image from memory as the background. The image in the window can then be seamlessly switched, faded in and out or even zoomed in or out. Keying can be applied to each window independently.

# In Either Broadcast Or Pro A/V
## the C2-7000 gets the job done

### 2x SDTV - HDTV Scalers (HD-SDI)
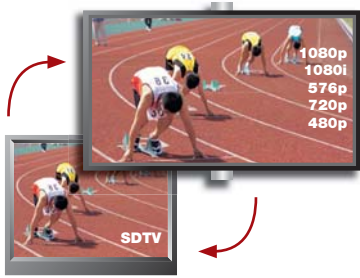
Convert any Standard Definition video signal into High Definition and change the aspect ratio. The C2-7100 can transform Composite, S-Video or YCbCr signals into YPbPr analog or DVI at HDTV resolutions. The C2-7200 can take this a step further and provides the output in HD-SDI as well.

### 2x PC - HDTV Scalers
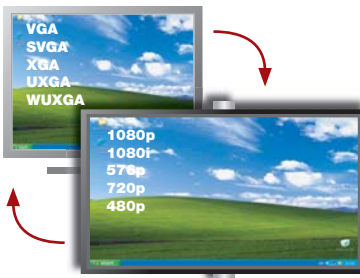
Convert any computer signal into a High Definition Television signal. The C2-7100 can transform any RGB computer signal (up to 2048x2048 at any refresh rate) into analog YPbPr or DVI in HDTV resolutions. The C2-7200 can take this a step further and provides the output in HD-SDI as well.

### 2x HDTV - HDTV Scalers

Converting from one High Definition Television resolution to another in analog and DVI is easy work for the C2-7000 Series. Freely move among 480i, 480p, 576i, 576p, 720p, 1080i and 1080p resolutions. The C2-7200 even incorporates HD-SDI into the conversion mix. Up-conversion or Down-Conversion with ease.

### 2x PC - PC Scalers
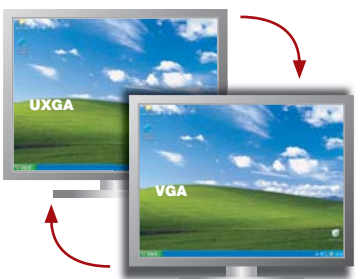
Convert virtually any computer resolution (up to 2048x2048 and refresh rates up to 250Hz) to any other computer resolution and refresh rate. The use of our exclusive CORIO2 technology allows the C2-7000 Series to handle not only standard resolutions, but any custom ones as well.

### 2x Analog - DVI Converters

Analog computer signals in either RGB (including RGBHV, RGBS or RGsB) or YPbPr formats can be converted to DVI and the resolution or refresh rate changed. Similarly, any DVI signal can be converted to Analog. Match the source to the display with ease.

### 2x Multi-Format Genlocks

Genlocking different video and computer signal formats is effortless for C2-7000 Series products. Any of the multiple video inputs can be the lock source. Lock computer to video, analog to digital - in any combination. Furthermore, each of the two outputs can be genlocked to different sources.

### 2x Analog - SDI (SD or HD) Converters

The C2-7200 is right at home in broadcast stations and eases the transition to digital television. Any analog video or computer signal can be converted to SD-SDI or HD-SDI, not once but twice. The unit's two channels operate completely independently, providing the power of two A to D or D to A Converters in a single box.

### 2x Video Transcoders

The convergence of video and computers, coupled with analog to digital migration brings with it a virtually limitless array of signal formats. The C2-7000 Series can handle conversion of virtually any signal format to any other, digital or analog. Each channel can handle a different conversion task simultaneously.
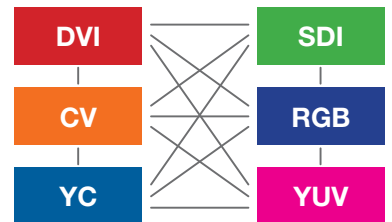
### Multi-Format Windowing Device

Freely mix format types for the Windows and Background. Any video input or any of the stored images can be selected for either of the two windows or the background. Windows may be of any size and aspect ratio and in any position. They can be solid or transparent and can be faded in or out of the background.

### 2x Multi-Format Frame Sync / TBC's

Synchronization of video to video, video to computer or computer to computer is a breeze. Analog to analog, analog to digital or digital to digital is no problem. SDTV to SDTV, SDTV to HDTV or HDTV to HDTV is taken in stride. You name it and the C2-7000 Series can synchronize it.
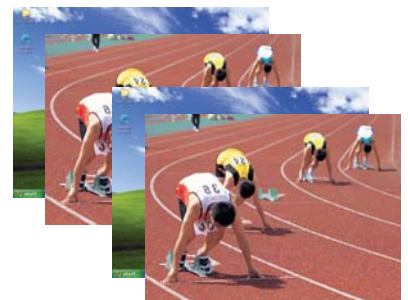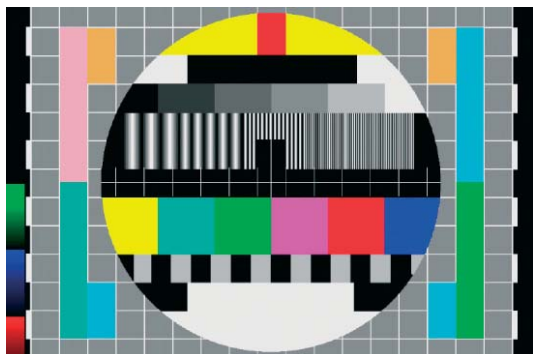
## Multiple Test Pattern Storage

The built-in Memory can be used for Test Cards storage and logos. Multiple memory slots are available for storage of Test Cards and logos. Images may be GIF, JPEG or BMP format files and can be uploaded via RS-232 or IP. These images can be recalled from memory via the front panel or remotely via the Windows Control Panel. If a Test Card is used frequently, it can be assigned to a front panel button for instant access.

## Advanced 3:2 Pulldown

### effortlessly de-interlaces video from film

Our exclusive CORIO2 conversion technology enables the C2-7000 Series to employ advanced proprietary pixel adaptive motion compensation to smooth out fast moving images. The automatic 3:2 Pull-down efficiently de-interlaces NTSC video originating from 24 fps film. The end result is no image quality penalty when incorporating original film footage into video.



NTSC from Film

De-interlaced 24 fps
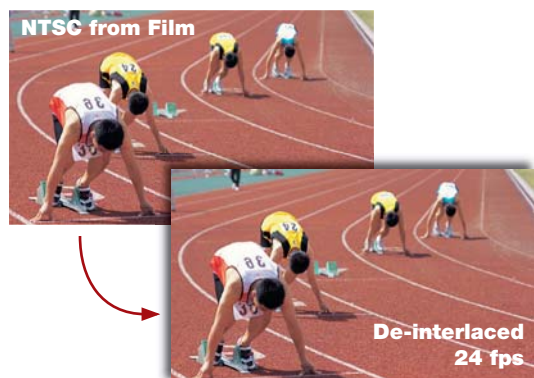
## True 4:4:4 Sampling

### for perfect keying

Full bandwidth color sampling not only enhances the appearance of the output video image but it also allows precise keying, including Soft (feathered edge) Keys or Hard (clearly defined edge) Keys, right down to the pixel level. Choose images from the internal memory or video from any of the inputs as the key source or background.
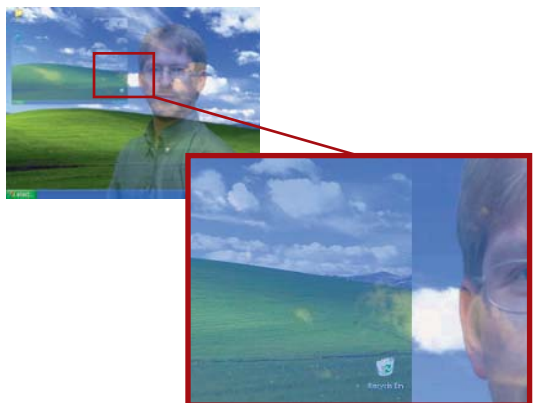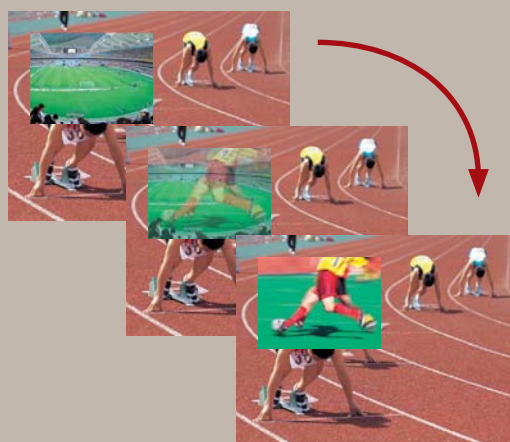


# 3 Different Operational Modes
## for simplicity of control

### Switcher
Mode

**1**



Provides equally powerful Program and Preview channels for live event switching. In addition to previewing inputs before selection, even complex functions, such as Chromakeys and Picture-In-Picture, can be previewed for setup, totally independent of the Program channel output. Seamless transitions from Preview to Program can be either by Cut, Variable Duration Cross-Fade or Special Effects. Any signal format can be freely mixed with any other.

### Independent
Mode

**2**



Provides the power of two independently functioning products, performing different tasks in one box. Each output can deliver different formats and resolutions simultaneously. For example, a presentation being fed to a high resolution display on Output 1 via DVI can also be fed to a VCR for recording on Output 2 via Composite Video. In a Broadcast environment, the C2-7200 can function as two completely independent Analog to HD-SDI Converters, each genlocked to a different reference and each with a different logo or ID keyed in.

### Dual PIP
Mode

**3**



Any video input can be squeezed and placed into either of two windows of any size and positioned anywhere on the screen, even overlapping each other with user defined layer priority control. The windows can be placed over any other video input or a static image from the unit's memory as the background. The image in the window can then be switched to another video input or even zoomed in or out. Keying can be added independently to each window and the background.

# Fully Programmable
## front panel buttons
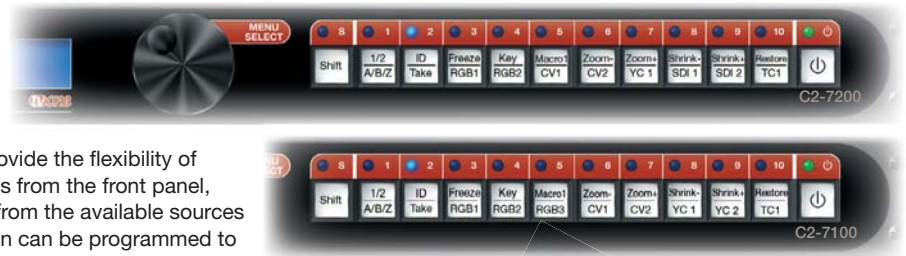


The Shift Key and 10 Programmable Buttons provide the flexibility of instantaneously performing 20 different functions from the front panel, without going into menu. Input signal selection from the available sources is a common use of several buttons. Each button can be programmed to do multiple tasks. For example, a single button may be assigned the task of putting the unit in the PIP mode, setting the size and position of the window and choosing the video source for the window. Keying is another common application. A single button can choose the key source, key level and other parameters associated with the task. The possibilities are virtually limitless.

# Windows Control
## via RS-232 or IP

An alternative to using the front panel buttons and menu is the Windows Control Panel, which affords complete control of the unit and adds scripting to facilitate long, complex command sequences. Connect via RS-232 or Ethernet.

# Fine Tune
## every input & output setting

Video signal parameter adjustments can be made for each video input and the settings stored in individual non-volatile memory, so they are retained even when the power is turned off. Since the output signal can be virtually any video or computer format, analog or digital, a lot of flexibility is required. While the parameters of most video formats are fixed, computer formats can vary widely. This requires the ability to match the native resolution and refresh rate of virtually any Digital Display.

# Custom Resolutions & Formats
## to cope with any display signal

What happens when a new digital display comes on the market with a native resolution that is not supported by your video scaler? Well, if your scaler's conversion engine is not based on CORIO2 technology, it could be obsolete. With the C2-7000 Series, there is no problem. The Windows Control software has an integral Resolution Calculator. You can enter the parameters of the new signal from your PC keyboard and create the resolution on the spot. This is also helpful for electronic systems used in the military, the medical industry and many industrial applications, which often output non-standard resolutions and aspect ratios. The Resolution Calculator enables immediate incorporation of most of these signals into the resolution database of the unit.



## Mulitple C2-7000 Control

Using the C2 Control software, you can even control multiple C2-7000 units simultaneously. This is especially useful in large A/V installations where multiple video streams need to be processed at once.
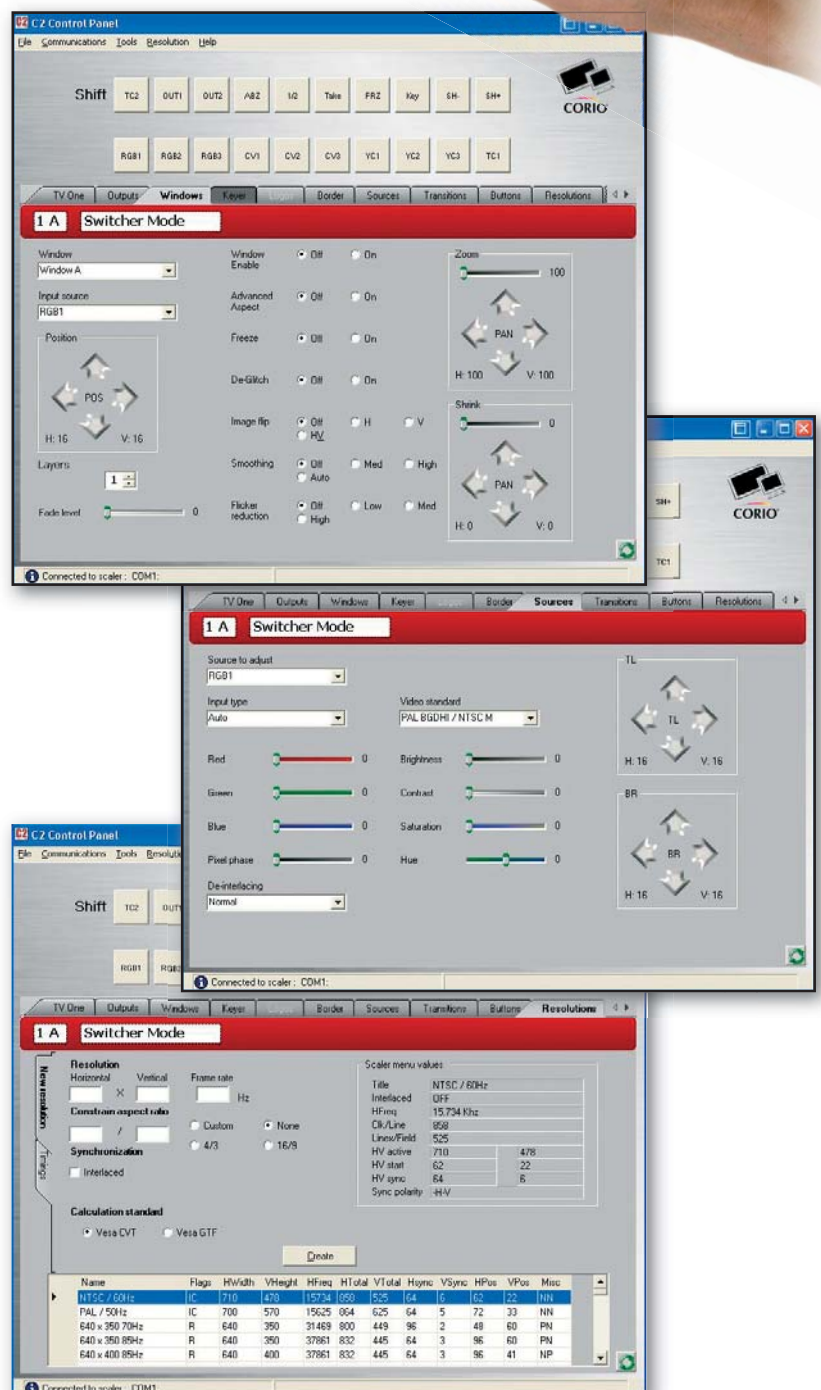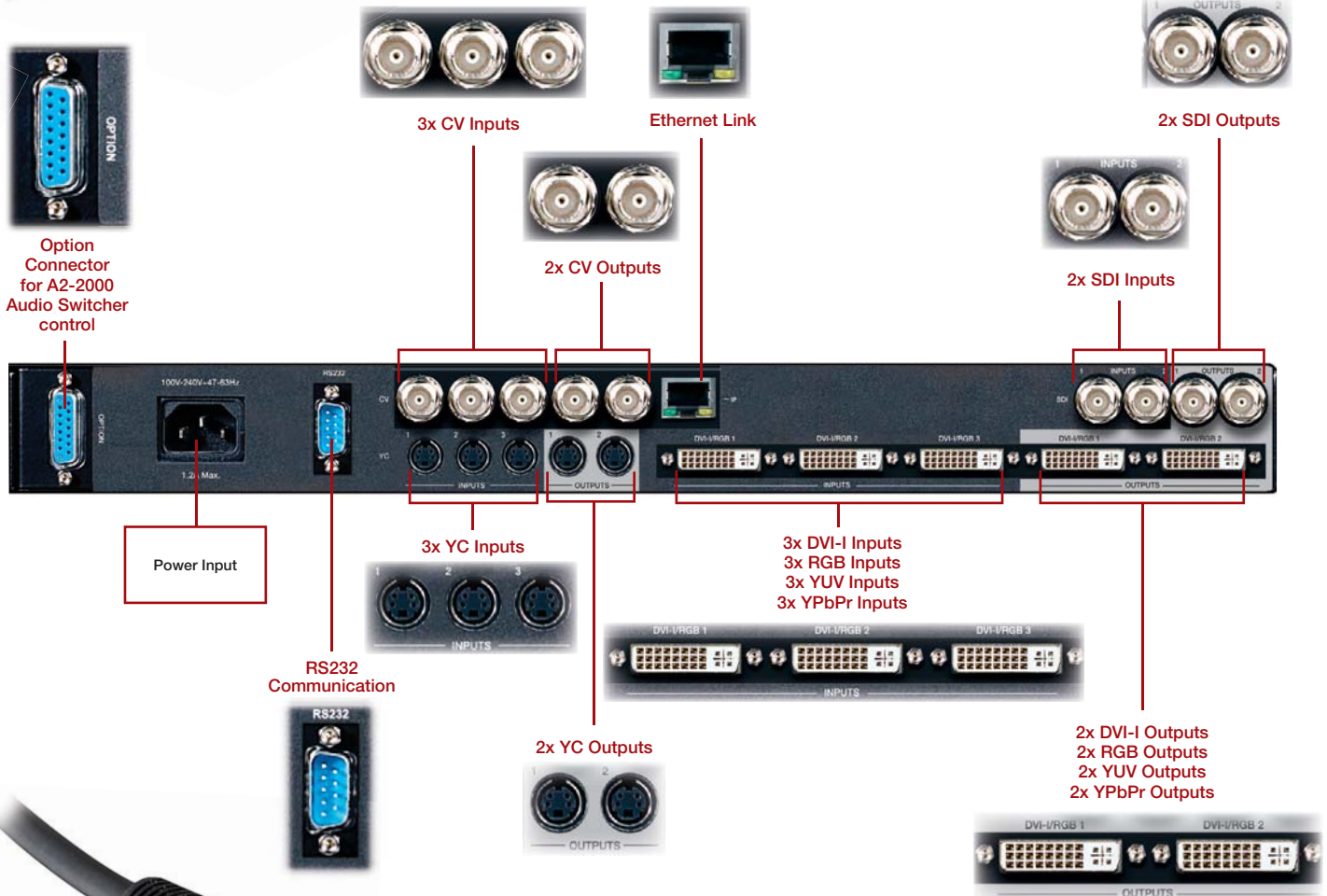
# All The Right Connections

## for all video signal formats & standards...

The C2-7200 has 11 video inputs to accommodate most analog and digital formats from virtually any video or computer source. This includes 3x Composite, 3x Y/C (S-Video), 2x SD-SDI or HD-SDI and 3x DVI-I, which can also be YCbCr, YPbPr, computer RGB with resolutions up to 2048x2048 at any refresh rate or any HDTV resolution. The C2-7100 has all the same inputs with the exception of the 2x SDI. Dual Channel functionality means that this same signal flexibility is available on the two independent outputs, so each can deliver an entirely different type of signal. Connections are available for control via RS-232 or IP. The Option Connector provides control and power to the optional external A2-2000 Audio Switcher.

**3x CV Inputs**

**Ethernet Link**

**2x SDI Outputs**

**2x CV Outputs**

**2x SDI Inputs**

**Option Connector for A2-2000 Audio Switcher control**

**Power Input**

**3x YC Inputs**

**3x DVI-I Inputs**
**3x RGB Inputs**
**3x YUV Inputs**
**3x YPbPr Inputs**

**RS232 Communication**

**2x YC Outputs**

**2x DVI-I Outputs**
**2x RGB Outputs**
**2x YUV Outputs**
**2x YPbPr Outputs**

## C2-7100

## all the power of the C2-7200, but without SDI...

If your applications do not require SD-SDI or HD-SDI inputs or outputs the C2-7100 is the solution. It has all the same features and power of the C2-7200, but without SDI in or out.

# Ethernet IP Control

## for control over a network or the internet

Remote control of the C2-7000 Series is by the RS-232 and IP Interfaces that come standard with the products. Use the Windows Control Panel, which is available at no charge, to control all of the unit's functions remotely. Third party control systems can also be used to control the C2-7000 Series. The straight forward command structure is available for download at our support website.

# High Quality Accessories
## to compliment the C2-7000…

## CC-300
### CORIOconsole

The CC-300 CORIOconsole is the ultimate Video Production Switcher/DVE type interface for CORIO2 products. It allows effortless control of all the many powerful features contained within the C2-7000 series. With a CORIOconsole all the complex switching, Picture-in-Picture, Chromakey and Lumakey procedures become simple to achieve. A full range motion Joystick provides pinpoint positioning of the dual windowing features while the precision T-bar allows for smooth transitions and effects. The console has an integrated 6" touch screen LCD display and an array of 14 "soft keys" and 21 functional keys. These provide the operator a Functionality Multiplier for total control over any attached CORIO2 series Universal Video Processor.

Two rows of 14 illuminated and programmable buttons are provided for preview and program functionality of mixed format sources to enable total customization to all of the users needs. Full mode control and macro execution is provided within the low profile cabinet. Using a quality, rugged, all metal construction the CORIO Console is designed for desktop use or it can be vertically mounted in a standard 19" rack using the supplied rack ears. The fantastic CC-300 CORIOconsole is a "must have" accessory for all C2-7000 users.

External devices such as projectors, DVD players, displays, screens, routers, lighting and more can be controlled directly from the CC-300 CORIOconsole via the Calypso Pro I/O or ION Series machine control interfaces from Calypso Control Systems.

**calypso** control systems

www.calypsocontrol.com

Navigation Buttons

Selection Buttons
External source selection

# High Quality Cables
## to compliment the C2-7000…

Included with every C2-7000 Dual Channel Video Processor are a compliment of high quality Z-Plus cables to get you connected straight out of the box.

DVI-I to DVI-I

HD15 to HD15

5x

DVI-A to 5 Female BNC Adapter

C-Video BNC to BNC

DVI-A to HD15 Adapter

S-Video 4-Pin S-V to 4 Pin S-V

Also included is a D9F to D9F RS-232 cable

**Joystick**
For adjusting parameters &
positioning windows in the LCD display

**Fast Access Buttons**
For fast menu selection —
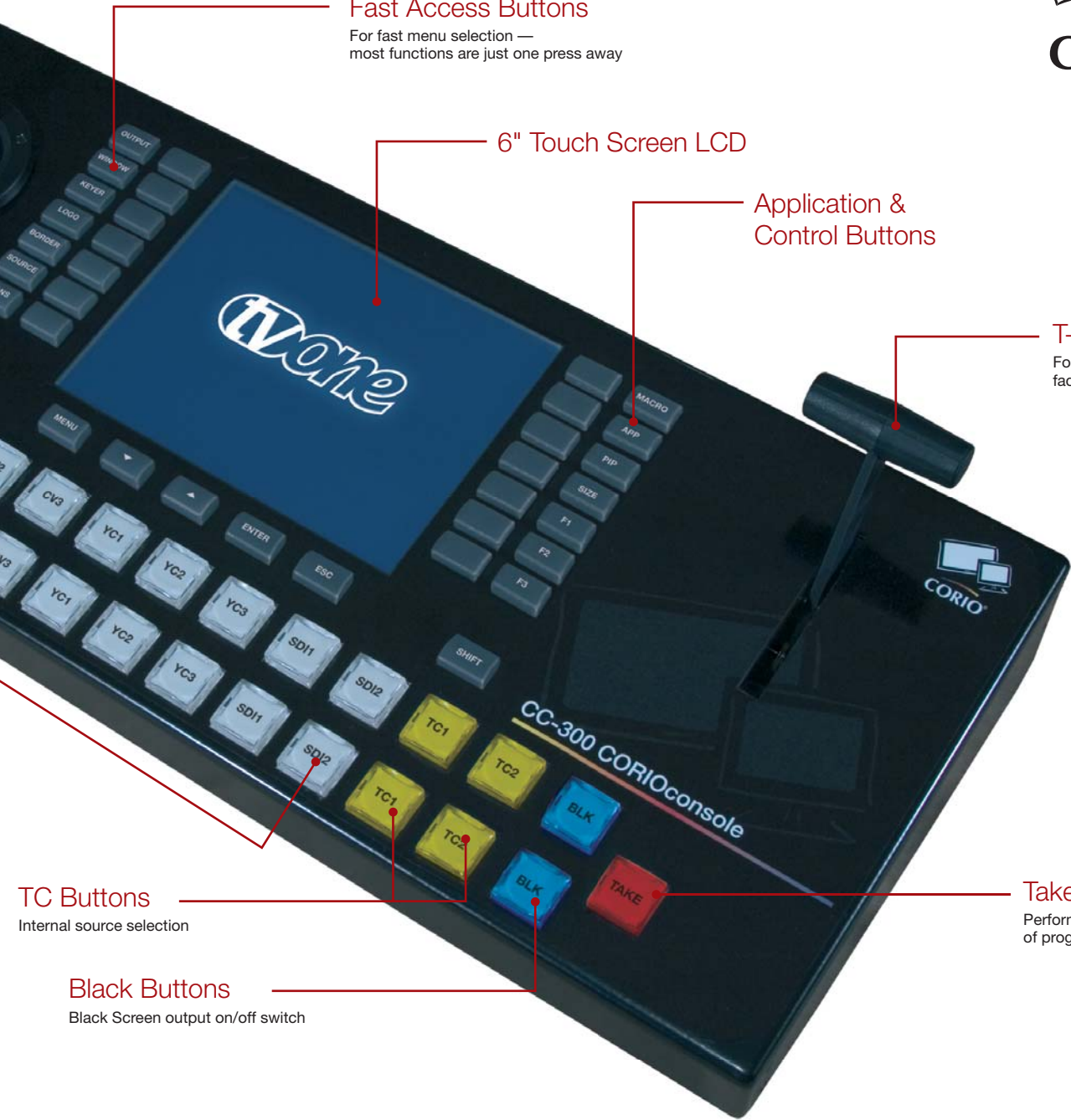most functions are just one press away

**6" Touch Screen LCD**

**Application &
Control Buttons**

**T-Bar**
For controlling video
fade/transition duration

CORIO®

CC-300 CORIOconsole

**TC Buttons**
Internal source selection

**Black Buttons**
Black Screen output on/off switch

**Take Button**
Performs fades/transitions
of programmable duration

**Input Selection/Manipulation**
| | |
|---|---|
| Mix/Effects Band | 2x14 inputs; Pgm, Prev. + Take |
| Fade/Wipe | Via Precision Fader |
| Image positioning | Via Precision Joystick |

**Mode/Function Selection**
| | |
|---|---|
| Dedicated Function Keys | 21 (Mode & Cross Functional) |
| "Soft" Function Keys | 14 (Variable Functions) |
| Shift Keys | 2 (Function Multiplier) |
| Integrated Display | LCD 6.5"x3.1" (163mmx80mm) |

**Mechanical**
| | |
|---|---|
| Size (H-W-D) | 2.6"x17"x6.9" (67x432x176mm) |
| Weight (Net) | 7.3 lbs (3.3 kg) approx |

**Environmental**
| | |
|---|---|
| Operating Temperature | +40° to +113° F (4° to +45° C) |
| Operating Humidity | 10% to 85%, Non-condensing |
| Storage Temperature | 32° to +140° F (0° to +60° C) |
| Operating Humidity | 10% to 85%, Non-condensing |

**Power Requirement**
| | |
|---|---|
| External Power Supply | 12VDC@2A  –  Locking DC |

**Warranty**
| | |
|---|---|
| Limited Warranty | 2 Years Parts and Labor |

**Regulatory Approvals**
| | |
|---|---|
| Converter Unit | FCC, CE |
| Power Supply | UL, CE, CSA |

**Accessories Included**
| | |
|---|---|
| 1x AC Power Adapter | US, UK or Euro Type |
| 1x RS-232 Cable | 6' (2m) |
| 1x Network Cable | 6' (2m) w/RJ-45 connectors |
| 1x Operations Manual | |

**Product Item Number**    CC-300 Hardware Control Panel

# A2-2000
## Audio Switcher

The A2-2000 Stereo Audio Switcher provides optional audio follow video or audio breakaway for the C2-7000 series. It handles both Low Impedance Balanced and High Impedance Unbalanced Audio. It is connected by a single interconnect cable and obtains power and control from the host unit.
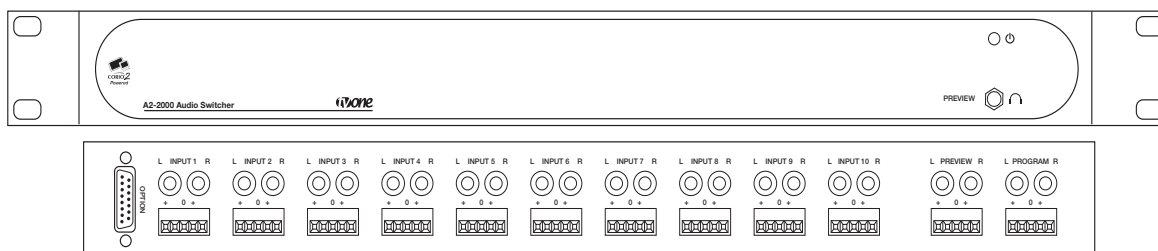


### Balanced Inputs & Outputs

| | |
|---|---|
| Maximum differential input level | ~ 18dBu (6 Vrms) |
| Common mode rejection ratio | ~ 80dB |
| Maximum differential output level | ~18dBu (6 Vrms) |
| Short-circuit current | ~ 70mA |
| Output drive ability | As low as 600 Ohms |

### Balanced Inputs & Outputs

| | |
|---|---|
| Maximum input level | ~ 12dBu (3 Vrms) |
| Maximum output level | ~ 12dBu (3 Vrms) |
| Short-circuit current | ~ 70mA |
| Output drive ability | As low as 600 Ohms |

### Preview Headphone Output

| | |
|---|---|
| Maximum input level | ~ 12dBu (3 Vrms) |
| Headphone volume adjustment | -15 to +15dB |

### Throughput

| | |
|---|---|
| Total harmonic distortion | ~ 0.02% from 20Hz to 20kHz |
| Crosstalk | ~ 65dB |
| Frequency response | 20Hz (-1.5dB) to beyond 50kHz |
| Signal to noise ratio | ~ 80dB |
| Input trimming | -15 to +15dB* with mute |
| Balance control | -15 to +15dB* |
| | *Total combined adjustments is -15 to +15dB |

### OPTION connector

| | |
|---|---|
| Type | D15 socket |
| Usage | Proprietary CORIO2 expansion - do not connect non-approved devices. |

### Environmental

| | |
|---|---|
| Power | 12v DC from C2 unit at ~300mA and internally fused (not user serviceable). |
| Storage temperature | 14°F to 158°F (-10 to +70 °C) |
| Storage humidity | 10% to 85% non-condensing |
| Operating temperature | 50°F to 113°F (+10 to +45 °C) non-condensing |
| Operating humidity | 10% to 85% non-condensing |

### General

| | |
|---|---|
| 1U Rack mount case | 19" Metal case $1^3/_4$" x $16^1/_2$" x $7^7/_8$" approx. 44 x 420 x 200mm approx. |
| Enclosure type | Metal |
| Weight | 5lbs 12oz / 2.7kg approx. |
| Compliance | CE, FCC Class |
| Warranty | 2 years parts and labor |

## First Class Content
### should travel first class

Z-Plus Cables are the highest quality available. Precision molded connectors are used for all assemblies and true 75 Ohm BNC connectors are used where applicable. Advanced termination techniques are employed to insure as nearly perfect impedance matching as possible. All Z-Plus Grade assemblies use UL Rated cable and many are CL-2 Rated. Extra steps are added to the Quality Assurance program to insure a uniformity of performance, including sweep test sampling.



## Obsolescence Insurance
### is a standard feature of CORIO2 technology



What you see today is not always all that you get. As with all CORIO2 based products, the C2-7000 Series can be field upgraded in a matter of minutes. Just go to our support website and download the latest firmware version, then flash upgrade the unit's memory via its RS-232 interface. This allows you to take advantage of many features that may be added in the future.

# High Level Specifications
## from years of innovation
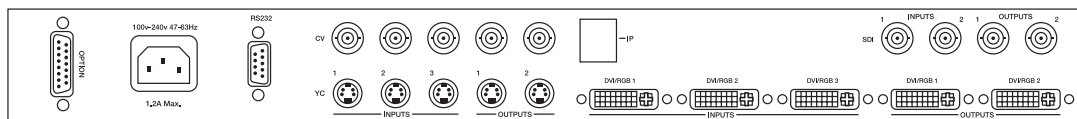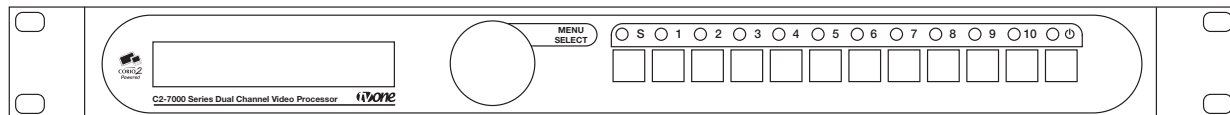


### Video Inputs
| | |
|---|---|
| Composite Video | 3x via BNC Connector |
| S-Video (Y/C) | 3x via 4-PIN Mini-DIN Connector |
| DVI-I (Note 1) | 3x via DVI-I Connector |
| SDI (SD or HD-SDI) | 2x via BNC (C2-7200 Only) |

### Genlock Input
| | |
|---|---|
| Reference Signal | Any of the Video Inputs |

### Independent Output 1
| | |
|---|---|
| Composite Video | 1x via BNC Connector |
| S-Video (Y/C) | 1x via 4-PIN Mini-DIN Connector |
| DVI-I (Note 1) | 1x via DVI-I Connector |
| SDI (SD or HD-SDI) | 1x via BNC (C2-7200 Only) |

### Independent Output 2
| | |
|---|---|
| Composite Video | 1x via BNC Connector |
| S-Video (Y/C) | 1x via 4-PIN Mini-DIN Connector |
| DVI-I (Note 1) | 1x via DVI-I Connector |
| SDI (SD or HD-SDI) | 1x via BNC (C2-7200 Only) |

### Input/Output Range
| | |
|---|---|
| Computer Resolutions | Analog: Up to 2048x2048 |
| | DVI: Up to 1280x1024 |
| Max Vert Refresh Rate | 250Hz |
| Max Horiz Frequency | 150KHz |
| HDTV Resolutions | All thru 1080p |
| Interlace Support | Progressive and Interlaced |
| Television Standards | NTSC 3.58, 4.43, PAL-B,G,I ,D, H, PAL-M, PAL-N & SECAM (In Only) |
| SDI (C2-7200 Only) | SD-SDI or HD-SDI |

### Input RGB Sync
| | |
|---|---|
| Type | RGBHV, RGBS, RGsB |
| Level / Termination | TTL, 10KΩ |
| Polarity | Positive or Negative |
| Maximum Level | 5Vp-p |

### Output RGB Sync
| | |
|---|---|
| Type | RGBHV, RGBS, RGsB |
| Level / Termination | 5Vp-p, 220Ω |
| Polarity | Positive or Negative |

### Audio Switching (Optional A2-2000)
| | |
|---|---|
| Stereo Inputs | 10x  Balanced and Unbalanced |
| Program Output | 1x Balanced and Unbalanced |
| Preview Output | 1x Balanced and Unbalanced |
| Connectors per I/O | 2x RCA for Unbalanced |
| | 1x Terminal Block for Bal & Unbal |

### Control Methods
| | |
|---|---|
| Local Front Panel | 10x2 Programmable Buttons +LED, Rotary Selector, and LCD |
| RS-232 Interface | DB-9 Male Connector |
| IP Interface | RJ45 Connector |
| Audio Switcher Control | Via D-15 Options Connector from the Main Unit |

### Mechanical
| | |
|---|---|
| Desktop Case    (HWD) | 1.75"x17"x7.9" (44x420x200mm) |
| With Rack Ears  (HWD) | 1.75"x19"x7.9" (44x482x200mm) |
| Weight (Net) | 8.4 lbs (3.8 kg) |

### Environmental
| | |
|---|---|
| Operating Temperature | +40° to +113° F (4° to +45° C) |
| Operating Humidity | 10% to 85%, Non-condensing |
| Storage Temperature | +32° to +140° F (0° to +60° C) |
| Operating Humidity | 10% to 85%, Non-condensing |

### Warranty
| | |
|---|---|
| Limited Warranty | 2 Years Parts and Labor |

### General
| | |
|---|---|
| Image Size & Position | AutoSet or Manual |
| Image Zoom Range | Continuous to 1000% |
| Image Shrink Range | Continuous to 10% |
| Image Mirroring | Horizontal and/or Vertical |
| Image Freeze | Full Frame |
| Video Sampling Rate | 108MHz |
| Resolution Memory | Approximately 1,000 Definable |
| Firmware Memory | Flash, Upgradeable via RS-232 |
| Flicker Filter | 4-Level Vertical |
| Picture-in-Picture | 2 Windows + Background from any 3 Video Inputs |
| Number PIP Windows | 2 in Dual PIP Mode |
| | 1 in Switcher & Ind. Modes |
| Video I/O Impedance | 75Ω |
| Video Decoder | 9-bit Digital |
| Comb Filter Decoding | Adaptive |
| De-Interlacing (PAL-NTSC) | Pixel-level Motion Adaptive |
| Film Mode (NTSC) | 3:2 Pull Down Detection |
| Video Encoder | 10-bit Digital |
| Digital Sampling | 24-bit, 8-bits per R, G and B |
| Colors | 16.7 Million |
| SDI Jitter | SMPTE 259M-C (270Mbps: 525/625 line) jitter 0.070 +/-0.01 UI |
| | SMPTE 292M (1.485/1.4835Gbps: 720p, 1035i, 1080i, 1080p) jitter 0.176 +/- 0.02 UI |
| Video Scaling Engine | Proprietary CORIO2® |
| Internal Format | 4:4:4 YUV |
| Internal Test Patterns | User Defined |
| LCD Panel | 24x2 Character |
| Logo Inserter | Flash Programmable |
| Proc Amp Adjustments | Brightness, Contrast, Saturation, & Hue for CV & SV Inputs, plus Video Level for RGB Input |
| Proc Amp Memory | Settings for each Video Input |

### Power Requirement
| | |
|---|---|
| Internal Power Supply | 100-240VAC, 47-63Hz, 50W |

### Regulatory Approvals
| | |
|---|---|
| Video Scaler Unit | FCC, CE |
| Power Supplies | UL, CE, CSA |

### Accessories Included
| | |
|---|---|
| 1x C-Video I/O Cable | 6' (2m)  BNC to BNC |
| 1x S-Video I/O Cable | 6' (2m) 4-Pin S-V to 4-Pin S-V |
| 1x DVI I/O Cable | 6' (2m) DVI-I to DVI-I |
| 1x HD15 to HD15 Cable | 6' (2m) |
| 5x RGBHV I/O Adapters | DVI to HD15 Adapters |
| 1x AC Power Cord | 6' (2m) US, UK or Euro Type |
| 1x RS-232 Cable | 6' (2m) DB9F to DB9F |
| 1 x DVI-A to 5 BNC | DVI-A to 5 BNC Female Adapter |
| 1x Operations Manual | |
| 1x Rackmount Kit | 2 Ears and 4 Screws |
| 1x Control Software | Downloadable from website |

### Optional Accessories
| | |
|---|---|
| A2-2000 | Audio Switcher (Note 2) |
| CC-300 | Hardware Control Panel |

### Product Item Number
| | |
|---|---|
| C2-7100 | Dual Channel Video Processor |
| C2-7200 | Version with SD/HD-SDI |

### Notes
(1)  DVI-I Input/Output connectors also accommodate RGBHV, RGBS, RGsB, YCbCr  & YPbPr signal formats.
(2)  A2-2000 is controlled from the C2-7100 or C2-7200 and provides Audio Follow Video or Audio Breakaway.

# C2-7000 Series

**tvone**